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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF ENTOMOLOGY
Washington, D. C.

CABBAGE WORMS

Among the cabbage worms commonly injurious to cabbage and other similar crops are included a number of species. Most common of these are the velvety green cabbage worms which are larvae or young of the common white cabbage butterfly, the loopers, which are larvae of a medium-sized grey moth, and the larvae of the diamond-back moth.

For the control of cabbage worms the use of Paris green, either as a dust or spray, is recommended. It may be used as a dust at the rate of 1 pound of Paris green to 10 pounds of hydrated lime, the application per acre being 16 pounds of the mixture per treatment; or as a spray at the rate of 1 pound per 100 gallons, 100 to 150 gallons per acre per application being used, depending somewhat on the size of the plants. The dust or spray may be used to protect the plants in the seed bed and the immature crop in the field, without danger to the consumer from poisonous residues.

The treatment of the crop with Paris green, or other arsenicals or poisons, including fluosilicates, is likely to result in the presence of poisonous residue on the market product, if applied as the crop approaches maturity. The exact time when treatments with the poison cease to be safe has not been definitely worked out, and would be quite different under varying conditions and locations. The period which must elapse between the last treatment and the harvest of the crop will depend largely on weather conditions, since prevailing temperatures will affect maturity of the crop and rainfall will aid in the removal of objectionable residues.

Every effort should be made to reduce the numbers of the pest during the early part of the season before the crop begins to mature. The dust should be applied so as to cover both surfaces of the cabbage leaves with a light even coating, and to avoid any excess applications of material. Excess application of material is particularly common where it is applied by the can or sack method. A duster of the blower or fan type or a horse-drawn traction or power-duster should be used.

If it is necessary to apply control measures after the crop is approximately half-grown, pyrethrum dust may be substituted for the arsenical spray at the rate of 6 to 8 pounds per acre. Recent experiments indicate that this is entirely feasible during the latter part of the season. It is somewhat more expensive than the arsenates, but our preliminary indications are that the cost is within economic possibilities, particularly when it is to be considered that otherwise the entire crop may be lost. Although not equally easy to control, the same methods are applicable to all the common worms attacking cabbage.

We do not recommend the use of the fluosilicates because the residue danger is not avoided and fluorine residues are to be as carefully guarded against as arsenical residues.

The Bureau has extensive experiments under way at the present time and we hope to be able to make more definite recommendations in the future in regard to the means of avoiding residue hazard.

TRUCK AND GARDEN CROP
INSECT INVESTIGATIONS

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